DOI: https://doi.org/10.15407/techned2016.04.098

DYNAMIC ROUTING OF WIRELESS ELECTRICAL SENSORS BASED ON NEURAL NETWORKS

Journal	Tekhnichna elektrodynamika
Publisher	Institute of Electrodynamics National Academy of Science of Ukraine
ISSN	1607-7970 (print), 2218-1903 (online)
Issue	№ 4, 2016 (July/August)
Pages	98 – 100

Authors
Ju. Yamnenko, Yu. Khokhlov, O. Redko
National Technical University of Ukraine “Kyiv Polytechnic Institute”,
37, Prospect Peremohy, Kyiv, 03056, Ukraine,
e-mail: petergerya@yahoo.com

Abstract

A method of dynamic routing based on the operation principles of neural networks, which allows to improve wireless sensor network by using an additional mechanism of error level accounting on routes. This method allows to dynamically monitor the quality of routes and select optimal routes. References 6, figures 2, tables 2.

Key words: wireless, sensor network, dynamic routing, IEEE 802.15.4, neural network, automation, optimization

Received: 28.01.2016
Accepted: 16.05.2016
Published: 21.06.2016

References

1. Kutulowski M., Cichon J., Kubiak P. Algorithmic Aspects of Wireless Sensor Networks. Poland, Wrozlaw: Springer, 2007.
2. Levis P., Madden S., Polastre J. TinyOS: An operating system for wireless sensor networks. New York, NY: Springer-Verlag, 2005. 374 p.
3. Moy, J. RFC 2328 OSPF Version 2. The Internet Society. April, 1998.
4. Border Gateway Protocol. Available at: http://www.cisco.com/ (accessed 12.01.2016)
5. Sutton R., Barto A. Reinforcement Learning: An Introduction. Cambridge: MIT Press, 1998.
6. Nilsson J.W., Riedel S.A. Electric Circuits. Prentice Hall, 2011. 794 p.

PDF